

**REMARKS/ARGUMENTS**

Applicant would like to thank the Examiner for the careful consideration given the present application. Reconsideration of the subject patent application in view of the present remarks is respectfully requested.

Claims 1 and 6 are amended.

New claims 17-20 are added.

***Claim Rejections - 35 USC § 103***

Claims 1-2, 6-7 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uesono et al (JP Pub. 2002-205169; hereinafter “Uesono”) in view of Mori (US Pat. 4,445,022) (both previously cited) and Dahlstrom et al. (US Pat. 4,076,131; hereinafter “Dahlstrom”) (newly cited). Applicants respectfully request withdrawal of the rejection for at least the following reasons.

Regarding the amended claim 1, none of Uesono, Mori and Dahlstrom, alone or in combination, discloses, teaches or renders foreseeable that the controller outputs a velocity command relating to a welding torch pull-up operation only to the dedicated separation control system and outputs a velocity command relating to an operation other than the welding torch pull-up operation to the position control system without the dedicated separation control system.

Uesono does not disclose the above feature of the amended claim 1, as admitted by the Examiner in the Office action which states that Uesono does not disclose a dedicated separation control system.

The Office action states that Mori discloses a velocity command relating to a welding torch movement operation in angular displacement is outputted to the dedicated separation

control system (Col. 8, Lines 31-46). However, there is no disclosure in Mori that the controller outputs a velocity command relating to a welding torch pull-up operation to the robot driving unit 44 (the alleged dedicated separation control system) and a velocity command relating to an operation other than the welding torch pull-up operation to the positioning controller 40 (the alleged position control system) without the robot driving unit 44. Instead, according to Mori, the position controller 40 delivers a command speed to the robot driving unit 44 to control the positioning of the main robot body 16 (Col. 8, Lines 38-42). It means that all of the velocity commands are outputted to the robot driving unit 44, regardless of the types of the velocity commands. Mori is silent about using two different systems and outputting a velocity command relating to a welding torch pull-up operation to one system and a velocity command relating to the other operation to the other system.

Dahlstrom fails to disclose the above feature of the amended claim 1, since Dahlstrom is merely cited for moving the actuator to the desired position. Dahlstrom is silent about outputting a velocity command relating to a welding torch pull-up operation.

Accordingly, the combination of Uesono, Mori and Dahlstrom does not meet all of the limitations of claim 1. Therefore, the asserted combination of Uesono, Mori and Dahlstrom does not render claim 1 obvious. Thus, withdrawal of the rejection as it applies to claim 1 is respectfully requested.

Similar arguments apply to claim 6. The other rejected claims are dependent from claim 1 or 6, and therefore the same argument will apply to these claims.

Claims 4-5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uesono in view of Mori, Dahlstrom and further in view of Hashimoto et al. (JP 11282540;

hereinafter "Hashimoto"). Applicants respectfully request withdrawal of the rejection for at least the following reasons.

Claims 4-5 and 9-10 are dependent from claims 1 and 6, respectively. Thus, all of the limitations of claims 1 and 6 are included in claims 4-5 and 9-10, respectively. For the same reason as claims 1 and 6, claims 4-5 and 9-10 should be allowable. Hashimoto is merely cited for the method of preventing collision and the increased threshold for detection of collision.

Regarding new claims 17-18, none of the references discloses that the controller controls an operation direction of the welding torch to be only the direction separating the welding torch from the workpiece.


Regarding new claims 19-20, none of the references discloses that respective gains of the velocity command relating to the welding torch pull-up operation and the velocity command relating to the operation other than the welding torch pull-up operation are separately changed to perform the feed-forward control. According to new claims 19-20, two types of the velocity commands are separately input and their gains are separately changed to perform the feed-forward control (see Fig. 1: KFFA 220, KFFB 221, and page 20, lines 11-24). The references are silent about this feature.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned agent to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No.: NGB-40647.

Respectfully submitted,

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